



The role of e-learning in open distance learning: a case study of a selected institution

Tlhanyi Olga Mabasa¹ and Gezani Phineas Baloyi²

Department of Curriculum Studies, College of Education, University of South Africa, Tshwane, Gauteng, Province, Republic of South Africa

Department of Quality Assurance and Enhancement, College of Graduate studies, University of South Africa, Tshwane, Gauteng Province, Republic of South Africa

Corresponding author, email: baloyigp@unisa.ac.za

Abstract

A qualitative approach was used to study the role of eLearning in Open Distance Learning at Unisa. This is an exploratory study. The importance of Open Distance and eLearning has motivated the researchers to embark on the study. For this limited scope dissertation, the researcher physically interviewed ten students selected using purposive sampling. The participants were limited to Unisa students enrolled in the College of Education. Participants were selected based on their experience in ODeL mode of learning. The data was analysed, presented, coded, organised, categorised and themes were identified. The findings suggest that participants understood student support in the context of ODeL. The responses revealed that ODeL reduces costs, is a flexible, enriched learning experience, increases success rate and encourages life-long learning for all age groups and cultures. The ODeL module should continuously be improved to remain credible. It is important to note that this paper could not address all issues of student support in ODeL. Although the participants were a small sample, it is believed that the findings of this study make a valuable contribution to eLearning in Open Distance Learning. Student monitoring, and effective mechanisms to curb internet access challenges for online students can ensure success. Furthermore, the findings revealed that students need to be taught computer literacy before registering for this specific online module.

Keywords: Digital learning; internet; online learning; Open Distance and eLearning; technology

Introduction

Although Open Distance and eLearning (ODEL) is a viable mode of learning which most students prefer as it is cost-efficient, students experience challenges during eLearning which hinders the success rate. The paper sought to investigate the role of eLearning in an Open Distance Learning (ODL) context at the university of South Africa (Unisa). Unisa is a comprehensive university which offers a combination of traditional academic and vocational teaching and research-orientated study programmes (University of SA, 2018, 3). It is South Africa's largest university and one of the 11 mega distance education universities in the world and largest open-distance learning institution in Africa. It is the longest standing dedicated distance education university in the world and enrolls nearly a third of South African students. Unisa is rated five stars for

excellence in research, employability, teaching, facilities, internationalisation, inclusiveness, and innovation. "Author, 2022", indicated that Unisa as an open distance eLearning (ODEL) university has embarked on online learning since 2011.

Research questions

In the light of the above that Unisa students fail online courses due to challenges face with online learning. Even though distance learning may appear to be easier than face-to-face classes, online courses require more discipline and work. Online learning has its own advantages as well as disadvantages. Students fail online courses due to technical obstacles and wrong expectations about the nature of online courses. Most students lack time management skills; hence they fail their courses, leading to dropping out. The lack of motivation for online classes led students to underestimate the complexity of the course and the

level of efforts required to master it (Shikulu, 2018, 358).

Lack of electronic devices such as a laptop with a stable internet connection to access lectures and study material, even to submit assignments due to affordability, hinders the learning progress. The lack of student support also plays a role, especially since novice students (newly enrolled students in their first year of study) who are unfamiliar with the whole process require it the most. Makoe and Nsamba (2019, 134) argued that the foundation of student academic success is through the quality of student support. On the one hand, first-year students feel isolated as they are used to the company of others and adjusting to the isolation associated with virtual learning ought to be very complicated, especially to those who lack computer skills.

Disruptions such as loadshedding during online learning hinders the learning progress. Students require stable internet connectivity. Therefore, students need effective support to cope and adapt in the academic environment as it is crucial for the institution to remain successful (Shikulu & Lekhetho, 2020, 6) and needs to be planned at pedagogy and practice level (Shabani & Maboe, 2021, 25). Open Distance and eLearning make it possible for students to continue studying remotely and achieve their goals while using electronic devices.

Open Distance and eLearning are a different way of learning and characterised by physical distance between the student and the university staff. Distance education refers to all forms of education that take place through communication by means of online learning or correspondence, for which students do not have to be physically present in a lecture room (Saykili, 2018, 2). Correspondence classes are a form of distance education where in most cases textbooks and coursework are sent via paper mail or e-mail. According to McCrie (2016, 425), correspondence students can complete their course work independently, and within their own schedule. In the light of the above, this paper investigates the challenges faced by ODeL students at the university of South Africa.

Based on the problem statement, the main research question is:

What are the challenges University of South Africa (Unisa) students face in the open distance and eLearning context?

To answer the research question, the following sub-questions of the research project will be answered.

- 1) What challenges do Unisa students face in their open distance and eLearning?
- 2) What are the opportunities offered by open distance and eLearning at Unisa?
- 3) What are the recommendations for Unisa students' success in open distance and eLearning?

The Problem Statement

Although online learning provides a good platform, certain challenges arise that affect not only students but also lecturers. Open distance education and eLearning students struggle with their study programmes for a variety of reasons. Shore (2020, 18) mentioned that an online class eliminates the human connection and therefore students' motivation, interaction, and lecturers' ability to adapt course materials and presentations are somehow compromised. Friedman (2020, 5) pointed out that technical issues, distraction, time management, staying motivated, understanding course expectations, absence of in-person interaction, adapting to unfamiliar technology, and uncertainty about the future are some of the challenges online students face.

Students' support services are the most vital component of Unisa's Open Distance and eLearning mode. The support services should not only be responsive to the needs of distance education students but should also be accessible. Open Distance students can be supported by delivering lectures, seminars, and course materials over the internet to students' personal computers, tablets, or cell phones. According to Shikulu (2018, 358), one does not need expensive hardware or software to start a distance course, but a reliable internet connection is vital. Unisa has several support services for students, from tutorial

support and counselling to online tools and the provision of data. The “distance” in open distance eLearning means that most of the interactions with Unisa students and lecturers take place at a distance – mostly in digital format.

The literature review has indicated that students’ support promotes students’ success in Open Distance Learning (ODL). Therefore, the students need effective support to cope and adapt in the academic environment (Shikulo, 2018, 366). The procurement of eLearning tools poses a challenge to students who cannot afford them, and it hinders the attainment of viable eLearning. It is evident that due to economic challenges, fewer students can afford a personal computer or laptop, and they might not be fully connected to the internet.

Most students do not have access to the internet hence they are sometimes compelled to go to internet cafés to get help and some students cannot even afford to buy data. Students who do not have computers are afraid to operate one. Computer literacy is a key skill needed in eLearning; hence, some students are unable to even do an online application for their study. Universities are under pressure to align their curriculum with nation-wide government initiatives that demand technological skills in education, which are influenced by global knowledge of the economy (Kakuchi, 2014, 379).

Theoretical Framework

This research is a descriptive and interpretive case study on the role of eLearning in Open Distance Learning students. The researcher employed qualitative research approach. The paper adopted the Community of Inquiry as the theoretical framework. This framework suggests the social presence, cognitive and teaching presence as vital components to promote the success of the educational occurrences in computer-mediated distance learning domain. Through community of inquiry framework, students take control and responsibility of their interactive learning. According to Garrison (2019, 13), the ability of the participants to extend their individual personalities to identify and communicate with the community and develop

inter-personal relationships is through social presence.

Breivik (2016, 1) defines cognitive presence as the extent to which students can establish and authenticate meaning through sustained reflection and discussion. According to Garrison (2017, 5), the cognitive presence refers to the process of inquiry that includes thinking, listening, and conveying thoughts in the process of analytical discourse. The process of thinking and learning is collaborative in intense and relevant ways, which goes beyond critical thinking by supporting and thinking collaboratively. Instructor guidance, building understanding and motivation are also included in the design elements.

Community of inquiry is compatible with the Unisa ODeL domain, which includes and e-tutor delivering instructions to the students. The discussion forums required students to participate and communicate actively.

Literature review

Today, we live in a world of constant emerging new technologies that are posing challenges in the field of education, especially as we are moving to the Fourth Industrial Revolution where classrooms are paperless. eLearning is used to offer instructional programmes to students at a distance (Arkorful & Abaidoo, 2015, 29). Online learning platforms emerge in a formal context and utilise a variety of multimedia technologies. A personal computer is usually used for delivering training or computer-enhanced learning related to eLearning (Samsuri, Nadzri & Rom, 2014, 139). Online learning depends on technology to create a positive environment in improving classroom engagement where students are purposely engaged in online tutorials to complete a task assigned to them.

Clark and Mayer (2016, 76) defined eLearning as instructions delivered through digital devices to support learning, and the science of instruction. Knowledge is acquired using a computer, the internet, or offline CD-ROMs. Online learning and eLearning were used interchangeably in this study. Students and instructors interact more during online learning, as it is a self-paced mode of learning. eLearning is one of the most used methods in our modern time.

It is basically a learning platform that uses information and communication technology (ICT) to transmit knowledge.

Islam, Beer and Slack (2015, 102) consider it vital to assess the mental and physical preparedness of the users before embarking on eLearning as students are completely involved when learning takes place using texts, videos, sounds, collaborative sharing, and interactive graphics. eLearning enhances the quality of learning at higher education institutions. The integration of information technology (IT) in the form of eLearning has resulted in the reduction of cost for students while at the same time improving the quality of learning (Songkram, 2015, 674).

This is an indication that eLearning holds economic advantage for students who use it because they can perform other useful activities in their spare time. eLearning is suited to distance learning and independent study, where students work in their own space and time, and at their own pace. eLearning is made possible by using electronic devices and platforms such as Microsoft Teams and Zoom. Textbooks are accessible in electronic format (e-books) which only require students to download them.

Online learning has been considered a useful tool for learning, and is cost-effective, flexible, and has the possibility of providing world-class education. Online activities involve a unique situation for lecturers and students' roles, which prompt both parties to accept a new, more independent role (Muir, 2014, 25). According to Yuan, Hou, Lin, Chen and Ren (2022, 166), online education gives students the opportunity to study from anywhere in the world, removing the need to follow an inflexible schedule. In addition to saving time, students also save money, which can be used for various other purposes. The virtual homeroom lecturer is also accessible wherever there is a Web connection.

Online learning takes place over the internet and involves the transition from traditional face-to-face classes to fully online where students receive instructions using technology without them being in physical interaction with the instructor. Online learning means a course is conducted through a learning management system

(LMS), in which students can view their course syllabus, academic progress, financial status of their courses and be able to communicate with other students and their lecturers. eLearning in South Africa is still hampered by a lack of skills and infrastructure, but universities are still optimistic and willing to bring ICT into the classroom. According to Du, Ochola and Wernher (2013, 441), LMSs are traditional forms of eLearning, designed for course management and they have limited impact on lecturers, lack personalised control for students and offer limited interaction and collaboration between students, lecturers, and courses.

Du, Ochola and Wernher (2013, 441) posit that eLearning promotes learner-centred learning as students are active agents and it enhances activities that promote collaboration, communication, and interaction, and give students better experience and enables students to apply knowledge. Colleges and universities around the globe are shifting to open distance education and eLearning as a replacement for on-campus delivery. Online learning has become more and more common, whether for comfort, adapting to work hours or just having the freedom to study from home. Furthermore, eLearning caters for different types and varieties of learning approaches by utilising much interactive content available on the internet and promote life-long learning (Songkram, 2015, 674).

Methods

Research approach and design

According to Tiffany Budert-Waltz and Kimberly (2021, 102), research methodology is a specific technique for collecting and analysing data to uncover new information. Research methodology provides a strategy by which a researcher plots out a systematic process to understand a phenomenon. McMillan and Schumacher (2014, 6), define research design as the plan that describes the conditions and procedures for collecting and analysing data.

Research approach

The research approach is a plan and procedure that consist of the steps of broad assumptions to detailed methods of data

collection, analysis, and interpretation. It is, therefore, based on the nature of the research problem being addressed (Chetty, 2018, 33). This study adopted a qualitative research approach, which typically uses a case study. The researcher opted for the case study because it is descriptive, exploratory, explanatory and researcher centred. The purpose of a research methodology was to specify a plan generating factual evidence that is used to answer the research questions and objectives (McMillan and Schumacher, 2014, 5).

Research Design

A case study design was employed to investigate the role of eLearning in Open Distance Learning. The researcher used case study to explore and unearth challenges ODeL students have through their online learning journey. Qualitative data are collected through observation methods, one-on-one interviews, and by conducting focus groups. Data are non-numerical in nature; and are observed or recorded.

Population and sampling

The target population sampled for this paper were Open Distance and eLearning Unisa students. The number of students were drawn from a total of 60 registered Unisa open distance and eLearning students. The gender and knowledge of the students were considered in this study. Purposeful sampling was used to sample Unisa ODeL students. Kassiani (2022, 22) refers purposeful sampling as a group of non-probability sampling techniques in which units are selected because they have characteristics that one needs in the sample, in other words, units are selected “on purpose”. Purposive sampling techniques work well in qualitative research designs that involve multiple phases, where each phase builds on the previous one

Data collection

The data collection method in this paper was interviews with Unisa open distance and eLearning students. Data collected was analysed and interpreted to arrive at valid findings using analytical and logical reasoning to determine patterns, relationships, and trends (Maree, 2022, 80). The researcher prepared interview questions in a questionnaire form in advance. These

questions were used in interviewing ODeL students at Unisa. It was made telephonically or one-on-one where circumstances allow, and this was a descriptive response. Sampling was done to include the group of students mentioned above. Participants were contacted telephonically to make appointments.

Data analysis

Data analysis and interpretation involve the qualitative proposal needs. These also indicate the steps within the analysis and the various forms of qualitative research (Creswell, 2014, 304). Data analysis is a process in which raw data are obtained and later transformed into information that is helpful for decision making by users. Data are collected and analysed to answer questions, test hypotheses or object to theories. This study employed the content analysis method to analyse the data. Content analysis is defined as the research method used to identify patterns in recorded communication. To conduct content analysis, one is systematically collecting data from a set of texts, which can be written, oral, or visual (Luo, 2019, 35). In this context, it analysed the challenges open distance and eLearning students at Unisa face.

Data reduction, data display and drawing even confirming conclusions, were related as the three crucial elements of qualitative data analysis as semi-structured interviews to bring out facts from the singled-out participants (Wishkoski 2020, 33). According to Roulsten and Halpin (2020, 401), data reduction as part of analysis occurs continuously during the analysis with the main objective consistently with qualitative analysis decreases facts without losing details. Information within the context must be protected in qualitative analysis. Braun and Clarke’s methods of data analysis was employed by the researcher after collected, coded data and transcription.

Findings and Discussion

The findings of this paper were based on collected data from the ten participants interviewed. Based on the interview results, nine out of ten participants asserted that one of the challenges they faced as open distance students was lack of electronic devices such as laptops, poor connectivity and disruptions during online

learning such as loadshedding. The first participant said that *“Poor network connection for online learning and My Unisa online platform taking time to respond. Load shedding disturbs scheduled online classes.* Loadshedding worsened matters because it disturbed online classes and caused him to miss out on a content. This was supported by Mohamedbhai (2020, 213); Timmis (2020, 76), indicated that students from poor backgrounds were disadvantaged due to lack of proper learning environments.

Most university students lacked internet access and electronic gadgets, and this affected learning. The second participant also expressed a similar opinion; *“As an open distance learning student, I face several challenges such as managing workload from the university. Internet crisis, power cuts caused by load shedding.”* Students experienced challenges in online learning which included technology access, especially in underdeveloped areas where students could not access information due to poor infrastructure (Ray, 2021, 159).

The third participant also conveyed the issue of technical challenges by saying, *“Technical issues due to lack of internet connections. Lack of technical equipment’s and computer knowledge.”* The fifth participant concurred with participant one and two saying that, *“Load shedding is a massive problem in my studies because I sometimes miss those arranged meetings with my lecturers. Accessing learning resources is not easy because of network issues. Not having proper gadgets to do your assignments or not being able to use gadgets to write your assignments.”*

Kattoua, Al-Lozi and Alrowward (2016, 754), online learning depended on technology for improving classroom engagement through a positive environment where students were deliberately engaged in online tutorials to complete a task assigned to them “This was said by the sixth participant as a confirmation that the loadshedding is very disruptive. *“When writing exams during loadshedding, the dealing with the slowness of network caused by loadshedding when it is time to submit a test or exam paper is traumatic.”*

The seventh participant stresses the challenge of network disruption saying that, *“Challenges of loadshedding and unstable connection/network when the virtual lessons are in progress.”* The eighth complained and said, *“Slow internet connection makes it difficult to attend online lessons and loadshedding makes it difficult to have the gadgets used for learning to be fully charged on time.”* The ninth participant asserted that, *“I encounter the challenge of load shedding, which disrupts my ability to maintain consistent online attendance and work. This issue is compounded by unreliable internet access.”* Brown (2017, 296) cited that there were many distractions during learning, including some students who are unable to mute their mics. The tenth participant indicated that, *“There are also technological issues that are often difficult to navigate, with internet connectivity issues, and online platforms navigation.”*

It is evident that network disruption due to loadshedding is a major challenge to all participants interviewed. Participants enjoy learning online as it gives them an opportunity to perform other functions while learning, however, the disruptions such as network hinders their progress. When interviewed, fourth participant mentioned that *“I work on my own without the help of a lecturer or a tutor since their scheduled meeting time with their students is limited and they are not always available when you need help.”* It is clear that the participant is the first-time student and still used to be in a face-to-face mode of learning. Du, Ochola and Wernher (2013, 26) posit that ODeL was characterised by geographical, physical, and historical separation between students and lecturers hence students felt isolated, disconnected and demotivated

Research findings of each participant interviewed were presented and supported by a literature review. The research findings revealed that many students were comfortable with the ODeL mode of learning. It was discovered that many of them were in employment and that they were able to use online platforms. However, lack of electronic devices, internet connection and data provisioning including loadshedding were a challenge.

Participants alleged that disruptions such as loadshedding encountered during their learning hinders progress. Few participants needed training in computer skills before embarking on their learning journey. Some students experienced a lack of support from their lecturers as they had to wait for the feedback on assignments and even responses to the emails they sent. As a result, they find it difficult to study online due to the delays they encountered.

Data provision by Unisa which did not last for a month was a challenge. The researcher viewed data provided as equal to the task. The night 20 GB catered for students who were working and studying simultaneously. Students went to work during the day and engaged with their studies at night. Data provided by the University had to be re-infenced only for university website so that it could last for the whole month. Students had to limit social media platforms as it was a distraction and consumed data meant for their studies.

Opportunities of Open Distance and eLearning

Open Distance and eLearning are suited to distance learning and independent study, where students work in their own space and time, and at their own pace. Flexibility is a major advantage of eLearning as it provides students the benefit to take classes anywhere and at any time. Furthermore, eLearning caters for different types and varieties of learning approaches by utilising much interactive content available on the internet (Songkram, 2015, 674). The accessibility of technology and the wide range of material offered on the internet have generated a surge in the need for web-based learning. eLearning is a viable option for those students with other commitments such as family, work or those who cannot participate due to specific reasons such as a disability.

Students living with disabilities have an opportunity to advance their education from any location by means of the integration and use of eLearning systems. eLearning students can achieve their objectives in a short space of time with less effort being made. While using an eLearning environment, one can observe the effect on educational learning in providing equal access

to the information irrespective of users' location, ethnic origins, race, and ages. The cost for infrastructure fees and materials are reduced or eliminated when eLearning facilities are provided and judiciously implemented. Students find ODeL enjoyable as they can access online classes anywhere and no need to travel.

Downloading study materials and reduction of the use of papers were opportunities presented by ODeL. Students did not need bookshops to purchase hardcopies of study materials. The use of e-books had reduced paperwork. Lectures are retrievable as classes are recorded and offered online. According to Samsuri, Nadziri and Rom (2014, 139), a personal computer was usually used for delivering training or computer-enhanced learning related to eLearning. In addition, online learning proved to be cost-effective, eliminated the need for physical materials, and promoted environmental friendliness by reducing the reliance on paper, minimising waste that impacted the environment, as cited by a participant.

Challenges of Online Learning

Despite the opportunities presented by ODeL mode of learning, students still experience challenges such as internet access and network, coupled with loadshedding while learning online. Most students do not have electronic devices, such as laptops due to affordability. As a result, they are unable to access online classes and to download study materials. According to Mhlanga and Moloi (2020, 180), socio-economic factor is a challenge for South African universities to move to online education since most students are unable to purchase a laptop because is expensive.

Students from rural areas are without technological access and not only deprived of information but also of developing essential skills for the digital age. This gap could result in long-term educational and economic setbacks, hindering individual and national growth. Online learning is affected by poor internet connection which disrupt virtual classes. The disruption led to laggy listening experiences, dropped connections, and a compromised overall learning environment. Learning is also disrupted by loadshedding which

can result in lazy students bunking online classes and put a blame on it.

Technology access is also a challenge experienced in online learning, especially in underdeveloped areas where students cannot access information due to poor infrastructure. eLearning students experience some challenges which lead to restricted outcomes. Arkorful and Abaidoo (2015, 29) conclude in their study that eLearning might result in a lack of students' interaction since it is held remotely. There are lots of distractions during learning due to some students unable to mute their mics and not having own space to work on. Brown (2017, 296) cited that eLearning utilises tools which are trade complicated including software and some functions that are not easy to use for both students and lecturers.

According to Owusu-Fordjour, Koomson and Hanson, (2020, 88), most university students lack internet access and electronic devices, and this affects learning. According to Mukhtar, Javed, Arooj and Sethi (2020, 27), students are unable to do their practical activities and that leads to a lack of feedback from lecturers. The following challenges were identified, technological barriers and variation in skill levels, lack of social interaction, absence of the internet, technical problems, and no collaboration between students. Students' access to technology is another challenge because South African students lack prior exposure to ICT systems, and this impacts negatively on them being unable to engage in online learning forums (Bharuthram and Kies, 2013, 410).

Lack of digital resources such as a laptop and connectivity hinder students' progress. Students needed gadgets and internet connection for the enhancement of their learning. Loadshedding is also a challenge as students were unable to log on for classes, uploading assignments which are due for submission and during exams, since exams are online.

Conclusion and Recommendations

Since it was found that student do not have electronic devices due to affordability, the university should provide students with laptops which have stable internet connection. The tuition

funds meant for prescribed books should be utilized to purchase laptops for students. This should be done so that students can have online access, download e-books and other learning resources. The researcher recommends that the devices must come pre-installed with university applications such Sakai and Canvas. Students alleged that data provided by the university is very little. It is evident that Unisa made a deal with network providers to cater for all students, however, the study recommend that data provided must be limited to study-related websites. This will help to minimise data usage for other platforms such as social media.

Matoane and Mashile (2013, 7) revealed that technologies used by students to access the learning material range from mobile phones to laptops and are in line with the research findings. Students should use their technological devices for quick access of their study material rather than collecting the material from their study centres or Post Office which sometimes create delays. Students should have unlimited access to the internet and stay connected so that they kept up with their studies. The government must reduce loadshedding or ensure to stop it as it is not only affecting the students but the economy at large.

Many participants interviewed had connectivity challenges while learning through distance education. In addition, all participants interviewed are affected by loadshedding. A few of the interviewed participants do not have laptops and they lacked computer skills. The recommendation made was that the university should offer students training in computer skills before they start with their learning journey. The university should also buy laptops for students because they cannot afford to buy them due to affordability.

As far as the challenges Unisa students faced in Open Distance and eLearning context, conclusions could be made that most students encountered poor network connection, and the limited data provided by the University which was very little to last for the entire month. Some participants could not purchase an electronic device, e.g. laptop due to affordability, if they do, they could not navigate the technology due to lack of computer skills, not alone dealing with slow

internet connection caused by loadshedding. Some participants could not purchase an electronic device, such as a laptop due to affordability, and if they could, they could not navigate the technology due to lack of computer skills and having to deal with slow or no internet connection caused by loadshedding and other factors.

Most interviewed participants were concerned about limited scheduled classes and working in isolation. It was discovered that lecturers did not respond to students' emails on time. The recommendations were made on how students could be supported. Students exhibited a good attitude towards ODeL since it saved them travelling time, it was affordable, and students could work at their own pace and space. The fact that lecturers were retrievable also made an impact on ODeL students.

Acknowledgements

In this article, I would like to acknowledge the Gauteng Department of Education for funding me to do this research, and all the participants who took part in this study.

ORCID

T.O Mabasa: <https://orcid.org/0009-0003-2265-6908>

G.P Baloyi <https://orcid.org/0000-0002-3581-5539>

References

- Arkorful, V. & Abaidoo, N. (2015). The Role of eLearning, Advantages, and Disadvantages of its Adoption in Higher Education. *International Journal of Instructional Technology and Distance Learning*, 12(1), pp. 29-42.
- Baloyi, G.P. (2013). Learner Support to Adult Students in Open Distance Learning: University of South Africa's Views. *Mediterranean Journal of Social Sciences*, 5(1). <https://doi.org/10.5901/MJSS.V4N13P555>
- Bharuthram, S. & Kies, C. (2013). Introducing eLearning in a South African Higher Education Institution: Challenges Arising from an Intervention and Possible Responses. *British Journal of Educational Technology* 44(3), pp. 410-20. <https://doi.org/10.1111/j.1467-8535.2012.01307.x>.
- Breivik, J. (2016). Critical Thinking in Online Educational Discussions Measured as Progress through Inquiry Phases. *International Journal of eLearning and Distance Education*, 31(1), pp. 1-16.
- Brown, A.D. (2017). Identity Work and Organizational Identification. *International Journal of Management Reviews*/19(3), pp. 296-317.
- Clark, R.C & Mayer, R.E. (2016). The Impact of Demographic Factors on Selected Aspects of eLearning in Higher Education. *International Journal of Information and Learning Technology*.
- Chetty, R. (2018). Bridging the Digital Divide. Measuring Digital Literacy. *International Journal of Research in Advent Technology, (IJRAT), special*, 2018.
- Creswell, J.W. (2014). *Research Design: Qualitative, quantitative, and mixed methods approach*. Thousand Oaks, CA: Sage.
- Du, S., Ochola, E.O. & Wernher, F. (2013). Improving Open Distance Learning Efficiency by Non-invasive Brain Computer Interface. *Paper Presented at the 4th Annual International Conference on Computer Science Education: Innovation and Technology (CSEIT)*, Singapore, pp. 26-31. October. <http://hdl.handle.net/10500/8740>.
- Friedman, V. (2020). The Challenge of Pivoting to Online Classes and how to tackle them. <https://www.usnews.com/education/best-colleges/articles/how-to-overcome-challenges-of-online-classes-due-to-coronavirus>.
- Garrison, D.R. (2017). *The community of inquiry. Cognitive presence and critical thinking*. London: Routledge.

- Garrison, D.R. (2019). Success in Community of Inquiry Environments. *University of Calgary, Alberta, Canada*.
- Islam, N., Beer M.D. & Slack, F. (2015). eLearning Challenges Faced by Academics in Higher Education. *Journal of Education and Training Studies*, 3(5), pp. 102-112.
- Kakuchi, R., (2014). *Journal of Polymer Science Part A: Polymer Chemistry*, 5(7), pp. 1047-1054.
- Kassiani, N. (2022). The role of Purposive Pampling Technique as a Tool for Informal Selection. GrXiv preprint arXiv: 2204. 05983, 2022.
- Kattoua, T., Al-Lozi, M. & Alrowward A. A. (2016). A Review of literature on eLearning Systems in Higher Education. *International Journal of Business Management and Economic Research (IJBMER)*, 7(5), pp. 754-762.
- Luo, M. (2020). The Psychological and Mental Impact of Coronavirus Disease. *Chinese Journal of Pathology* 49(5), pp. 411-417.
- McCrie, R. (2016). Security Operations in the Management Environment (*Third Edition*).
- McMillan, J. & Schumacher, S. (2014). Research in Education, 7th edition – Pearson Education Limited Research-based Inquiry. *Mediterranean Journal of Social Sciences* 5(23), pp. 1213.
- Makoe, M. & Nsamba A. (2019). The Gap between Student Perception and Expectations of Quality Support at the University of South Africa. *Journal of Distance Education*, 33(20), pp. 132–141.
- Maree D. J. (2022). Sensors 22(11). *Journal of Neonatal Nursing*, pp. 27-144.
- Matoane, M. & Mashile, E.O. (2013). Key Considerations for Successful E-tutoring: Lessons Learnt from an Institution of Higher Learning in South Africa.” *Paper Presented at the E-Learn: World Conference on eLearning in Corporate, Government, Healthcare, and Higher Education*, Las Vegas, 21 October. <https://www.learntechlib.org/114955/>.
- Mhlanga, D., & Moloi, T. (2020). COVID-19 and the Digital Transformation of Education: What are we Learning on 4IR in South Africa? *Educational Sciences*, 10(7), pp. 180. <https://doi.org/10.3390/educsci10070180>
- Mohamedbhai, G. (2020). Covid-19: What Consequences for Higher Education in Africa? *University World News*, <https://www.universityworldnews.com/post.php?story=20200407064850279>.
- Muir, A., Ramachandran, S., Roelants, F.M, Timmons, G. & Thorner, T., (2014). Chronicling Engagement: Students’ Experience of Online Learning over Time. *Distance Education*. <https://doi.org/10.1080/01587919.2019.1600367>.
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for Online Learning During Covid-19 Pandemic Era. *Pakistan Journal of Medical Sciences*, 36, Covid19-S4, 27-31. <https://doi.org/10.12669/pjms.36.COVID19-S4.2785>
- Owusu-Fordjour, C., Koomson, C.K & Hanson, D. (2020). The Impact of COVID-19 on Learning- The perspective of the Ghanaian Student. *European Journal of Education Studies*.
- Ray, P. (2021). The Corona Virus Response: Boxed in by Models. <https://doi.org/10.1177/1356389020968579>.
- Roulsten, K. & Halpin, S.N. (2020). Students’ Interaction in a Synchronous Discussions in Qualitative Research Methods Coursework. *International Journal of Social Research Methodology*, 24(4), pp. 401-412.
- Samsuri, N.N., Nadziri, F.A. & Rom, K.B.M. (2014). A Study on the Student’s

- Perspective on the Effectiveness of Using eLearning. *Procedia-Social and Behavioural Sciences*, 123, pp. 139-144.
- Saykili, A. (2018). Distance Education: Definitions, Generations, Key Concepts, and Future Directions. *International Journal of Contemporary Educational Research*, 5(1), pp. 2-17.
- Saykili, A. (2018). Distance Education: Definitions, Generations, Key Concepts, and Future Directions. *International Journal of Contemporary Educational Research*, 5(1), pp. 2-17.
- Shabani, O. & Maboe, K. A. (2021). The Effectiveness and Efficacy of Student Support Services in Open Distance Learning Institute in Africa: *A desktop review*. URL: <https://hdl.handle.net/10500/29553>.
- Shikulo, L. (2018). Learner Support Services as a Factor of Students' Performance in Open Distance Education. *International Journal of Science and Research (IJSR)* ISSN.
- Shikulo, L. & Lekhetho, M. (2020). Exploring Student Support Services of a Distance Learning Centre at a Namibian university, *Cogent Social Sciences* (2020), 6: 1737401 <https://doi.org/10.1080/23311886.2020.1737401>.
- Shore, J. H. (2020). Online Distance Learning: *Thematic Study on the Challenges Faced by Educare College INC*. Primary School. Universities of SA. (2018). Understanding Students: Putting Students at the Centre of Institutional Design. *Centre for Teaching and Learning, UFS, Issue 2*. https://www.ufs.ac.za/docs/librariesprovider42/sassedocuments/publicationsdocuments/understanding-student-putting-students-at-the-centre-of-institutionaldesign_web.pdf?sfvrsn=f048b121-2.
- Songkram, N. (2015). eLearning System in Virtual Learning Environment to Develop Creative Thinking for Learners in Higher Education. *Procedia-Social and Behavioural Sciences*, 174, pp. 674-679.
- Tiffany, B. & Moffit, K. (2021). Research Methodology, Definitions, Techniques & Examples. Wishkoski, R. (2020). Semi-structured Interviews: A Team-based Approach to Design, Implementation, and Analysis.
- Yuan, W., Hou, Y., Lin, Q., Chen, L. & Ren, T. (2022). The Negative Impact of Loneliness and Perceived Stress on Mental Health for two Months Lockdown in Shanghai. *Journal of International Education in Business*, 10(2), pp. 166-182.